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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,089	07/08/2003	Hiroyuki Kawamura	NIL-196	8364

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EXAMINER

HERNANDEZ, NELSON D

ART UNIT PAPER NUMBER

2622

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/614,089

Applicant(s)

KAWAMURA ET AL.

Examiner

Nelson D. Hernandez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5 is/are rejected.
- 7) ☒ Claim(s) 3,4,6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Response to Amendment***

2. The Examiner acknowledges the preliminary amendments filed on July 8, 2003. Claim 5 has been amended. Claims 6 and 7 have been newly added.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hieda, US Patent 5,675,381 in view of Schofield, 2002/0167589 A1.**

**Regarding claim 1,** Hieda discloses an imaging system (Fig. 5) comprising:

imaging means (Fig. 5: 11) for taking an image of a place and converting the image into an electric signal; and an image processor (Fig. 5: 14A) switchable between an automatic exposure control for continuously and periodically supplying images of same light exposure (conventional electronic shutter mode; col. 15, lines 25-32) amount

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at a predetermined cycle of signal accumulating time of the imaging means and a double exposure control (multiple exposure mode; col. 15, lines 25-32) for varying the signal accumulating time of the imaging means at a predetermined cycle and continuously and periodically supplying images of different light exposure amount (Col. 6, lines 59-64), wherein the image processor switches the automatic exposure control and the double exposure control depending on a state of intensity of the image (Col. 16, lines 8-49; col. 5, lines 29-45; col. 6, lines 59-64; col. 7, line 55 – col. 8, line 4; col. 13, lines 42-53; col. 14, lines 30-40; col. 15, lines 25-32; col. 16, lines 8-49; col. 18, lines 14-20).

Hieda does not explicitly disclose an infrared ray illuminating means for radiating an infrared ray and that the images are taken from a place illuminated by the infrared ray illuminating means.

However, Schofield discloses an imaging system (See figs. 18 and 19) comprising: infrared ray illuminating means (Fig. 19, 162) for radiating an infrared ray; imaging means for taking an image (Fig. 19: 14) of a place illuminated by the infrared ray illuminating means and converting the image into an electric signal; and an image processor (Figs. 18: 18; 21: 18 and 22: 18) for varying signal accumulating time of the imaging means at a predetermined cycle and continuously and periodically forming images of different light exposure amount (Page 11, ¶ 0089-0090 and page 12, ¶ 0094-0096).

Therefore, taking the combined teaching of Hieda in view of Schofield as a whole, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to modify Hieda by having an infrared ray illuminating means for radiating an infrared ray and having the images taken from a place illuminated by the infrared ray illuminating means. The motivation to do so would have been to enhance the image to be captured in low light conditions as suggested by Schofield (Page 11, ¶ 0089).

**Regarding claim 2**, the combined teaching of Hieda in view of Schofield as applied to claim 1 teaches that the image processor switches the automatic exposure control to the double exposure control when a bright area of the image exceeds an intensity threshold as a reference of a bright image and dimensions of the area exceed an area threshold as a reference of switching (See Hieda, col. 16, lines 8-49).

**Regarding claims 5/1 and 5/2**, the combined teaching of Hieda in view of Schofield as applied to claim 1 teaches that the infrared ray illuminating means (Schofield, fig. 19, 162), the imaging means (Schofield, fig. 19: 14), and the image processor (Schofield, figs. 18: 18; 21: 18 and 22: 18) are provided in a car (See Schofield, fig. 19), the infrared ray illuminating means illuminates an outside of the car with the infrared ray, and the imaging means takes an image of the outside of the car (Schofield, page 3, ¶ 0044-0047). Grounds for rejecting claim 1 apply here.

#### ***Allowable Subject Matter***

5. **Claims 3/1, 3/2, 4, 6 and 7** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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6. The following is a statement of reasons for the indication of allowable subject matter:

**Regarding claims 3/1 and 3/2**, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest that in the double exposure control, the image processor vertically extends the images of different light exposure amount and averages signal levels of the both extended images, thereby forming a composite image including all the limitations of claims 1 and 2 respectively.

#### ***Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernandez  
Examiner  
Art Unit 2622

NDHH  
December 6, 2006



TUAN HO  
PRIMARY EXAMINER